



Northern Tier Transmission Group (NTTG) Perspectives

**Rich Bayless - NTTG
Western Conference of
Public Service Commissioners
Regional Transmission Organizations Panel
June 16, 2008**

"To ensure efficient, effective, coordinated use & expansion of the member's transmission systems in the Western Interconnection to best meet the needs of customers & stakeholders. "



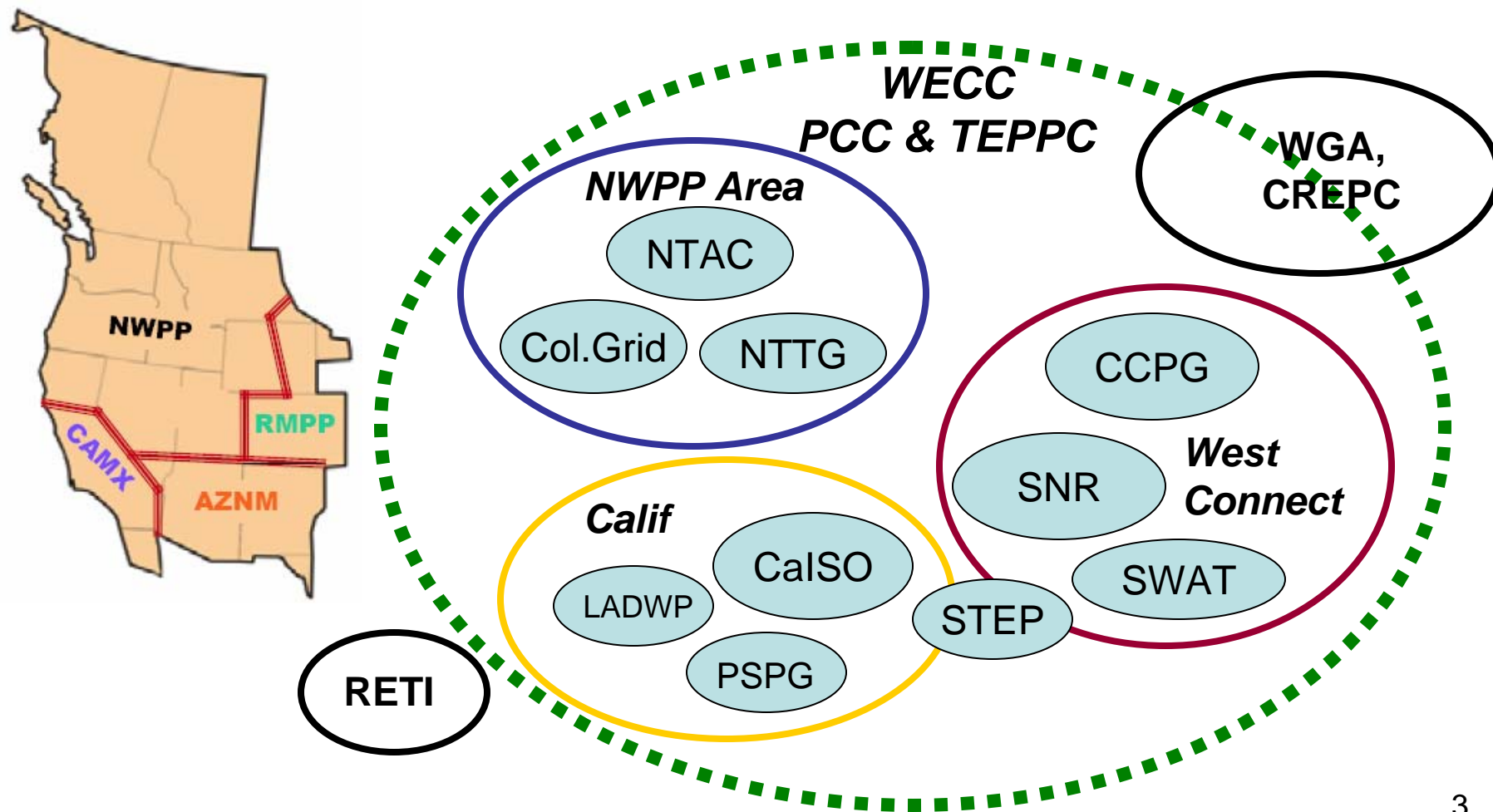
RTO Objectives

- Provide large footprint commercial transmission system
 - Multiple TO's who's combined systems act like a single transmission system
- Open Access that provides Comparable Transmission Service
 - For similarly situated customers
 - Network and PTP/through Customers
- Standard commercial terms and conditions, transparency
- Facilitates power markets
- Complies with relevant and latest FERC Orders
- And now...facilitates new Energy Policy and requirements



Transmission Organizations

(RTOs, rtos, groups, pools, etc)





NWPP Participating Organizations

Why are there three Transmission Orgs in the NW

- Alberta Electric System Operator*
- Alcoa Power Generation, Inc.
- Avista Corporation*
- B.C. Hydro
- B.C. Transmission Corp.*
- Bonneville Power Administration*
- Chelan County PUD*
- ColumbiaGrid
- Cowlitz County PUD
- Deseret Generations & Transmission Coop.
- Douglas County PUD*
- Eugene Water & Electric Board
- FortisBC
- Grant County PUD*
- Idaho Power Company*
- NorthWestern Energy*
- PacifiCorp*
- Pend Oreille County PUD
- Portland General Electric - Power Supply
- Portland General Electric*
- Powerex
- Puget Sound Energy*
- Sacramento Municipal Utility District*
- Sea Breeze Pacific RTS
- Seattle City Light*
- Sierra Pacific Power*
- Snohomish County PUD
- Tacoma Power*
- Turlock Irrigation District*
- U.S. Bureau of Reclamation
- U.S. Corps of Engineers
- Western Area Power Administration
 - Upper Great Plains*

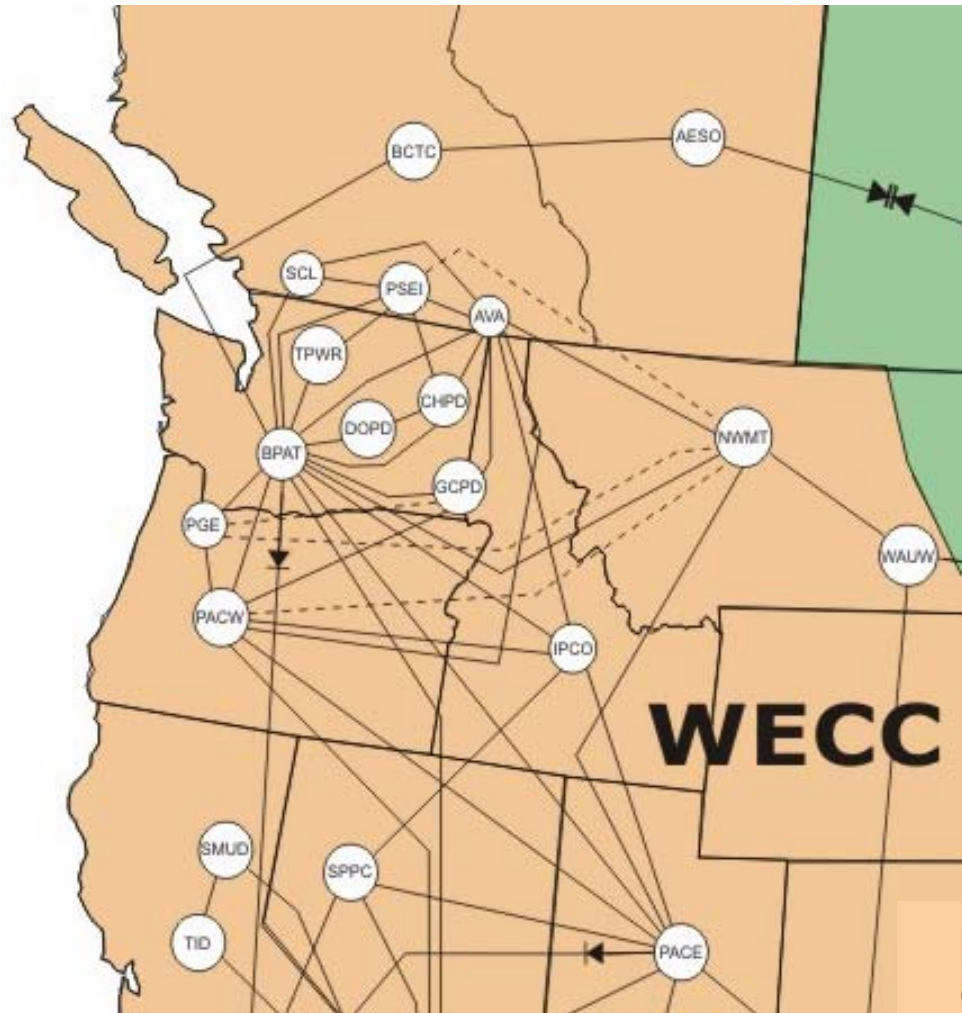
Northwest Demographics

- 8 U.S. States
- 2 Canadian Provinces
- Federal, Public, Private, Provincial Ownership
- International Border (Treaties associated with water)
- Non-Jurisdictional as well as Jurisdictional
- Preference Act – Public Law 88-552
- 160 Consumer-owned electric utilities
- 19 Control Areas (35 in the Western Interconnection)
- ~90,000 Megawatts Total Resources (44% WI)
- ~ 50% Peak load of the WI
- ~ 50% Energy load of the WI
- Automated Reserve Sharing Procedures
- Hydro Coordination
- Hydro Thermal Integration
- Hydro located on the West (BC, ID, OR, WA)
- Thermal located on the East (AB, MT, NV, UT, WY)



NWPP Balancing Areas

Summer Peak	Winter Peak
PAC – 18.36%	PAC - 17.03%
AESO – 14.77%	BCTC – 16.17%
BCTC – 13.18%	AESO – 15.27%
BPA – 11.74%	BPA – 14.40%
SMUD – 8.06%	PSE – 7.40%
PGE - 6.17%	PGE – 5.96%
PSE – 5.69%	SMUD – 4.21%
IPC – 5.53%	IPC - 4.03%
AVA - 3.33%	AVA - 3.33%
SPP - 3.33%	SCL - 2.69%
NWMT - 2.71%	NWMT - 2.57%
SCL - 2.35%	SPP - 2.54%
TPWR - 1.04%	TPWR - 1.51%
TID – 1.01%	CHPD – 0.89%
GCPD - 0.90%	GCPD - 0.80%
CHPD - 0.66%	TID - 0.52%
DOPD - 0.35%	DOPD – 0.49%
WAUW - 0.21%	WAUW – 0.17%
ColGrid – 25.71%	ColGrid – 31.03%
NTTG – 27.20%	NTTG – 23.63%
Other – 46.59%	Other – 45.34%





The Situation

- Loads growing
- Resource uncertainty – new & existing
 - Fuel Costs
 - Regulatory Mandates:
 - RPS, Efficiency, GHG
 - Green and Intermittent Renewables
 - Characteristics
 - Location
 - Tax Credits



The Situation, continued

Transmission

- Existing system fully utilized, and depreciated.
- Stringent new Reliability Standards
- Risks, uncertainty, and cost recovery of new mega transmission projects
 - FERC Order 679
 - State Regulation
- Major transmission construction takes longer than generation construction
- Major new transmission spans multiple states
- Cost of new transmission: Steel, ROW, Xformers Line Routing, ROW availability & cost, NIMBY, NIETC, permitting
- OATT Process and Tariff Pricing
 - Individual request process and clogged queues
 - Pancakes and/or incremental rates



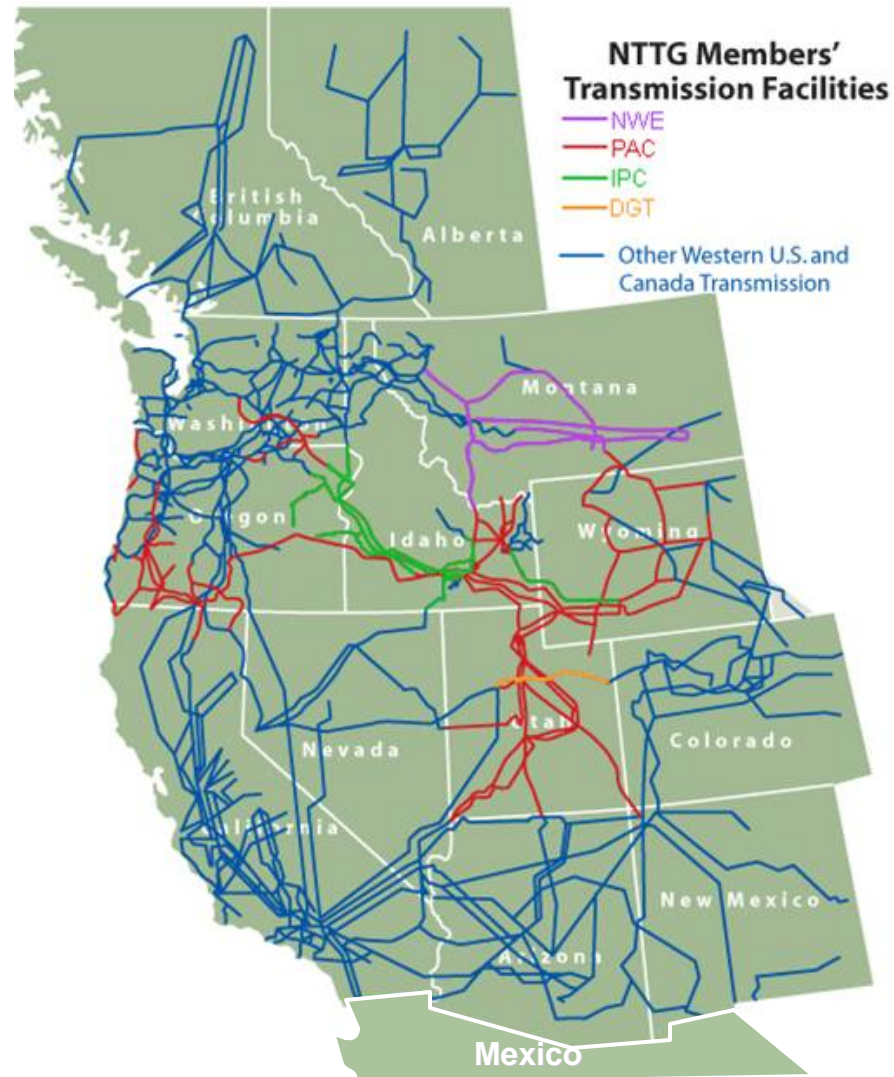
The Perfect Transmission System Would Be:

- Transmission that is sized to allow for flexibility in size, configuration, timing
 - Capacity to spare to all corners of the system
 - Captures renewable and load diversity, allows for resource uncertainty,
 - Adaptable to policy mandates
- Balancing Areas are consolidated or Virtual Large Control Areas
 - To Maximize benefits of diversity and renewables
- Re-Dispatch, Regulation, A/S, Capacity markets
 - To support intermittent resources and changing resource patterns
 - To facilitate new ways to regulate
 - Use of Concentrated Solar to shape wind
- Easy to use and obtain service, schedule
- Transmission Pricing
 - Fairly allocates costs to all users
 - Regional Tariff for PTP
 - Non-discriminatory rates and terms
 - Elimination of pancakes
- Coordinated initiatives and operation of all systems



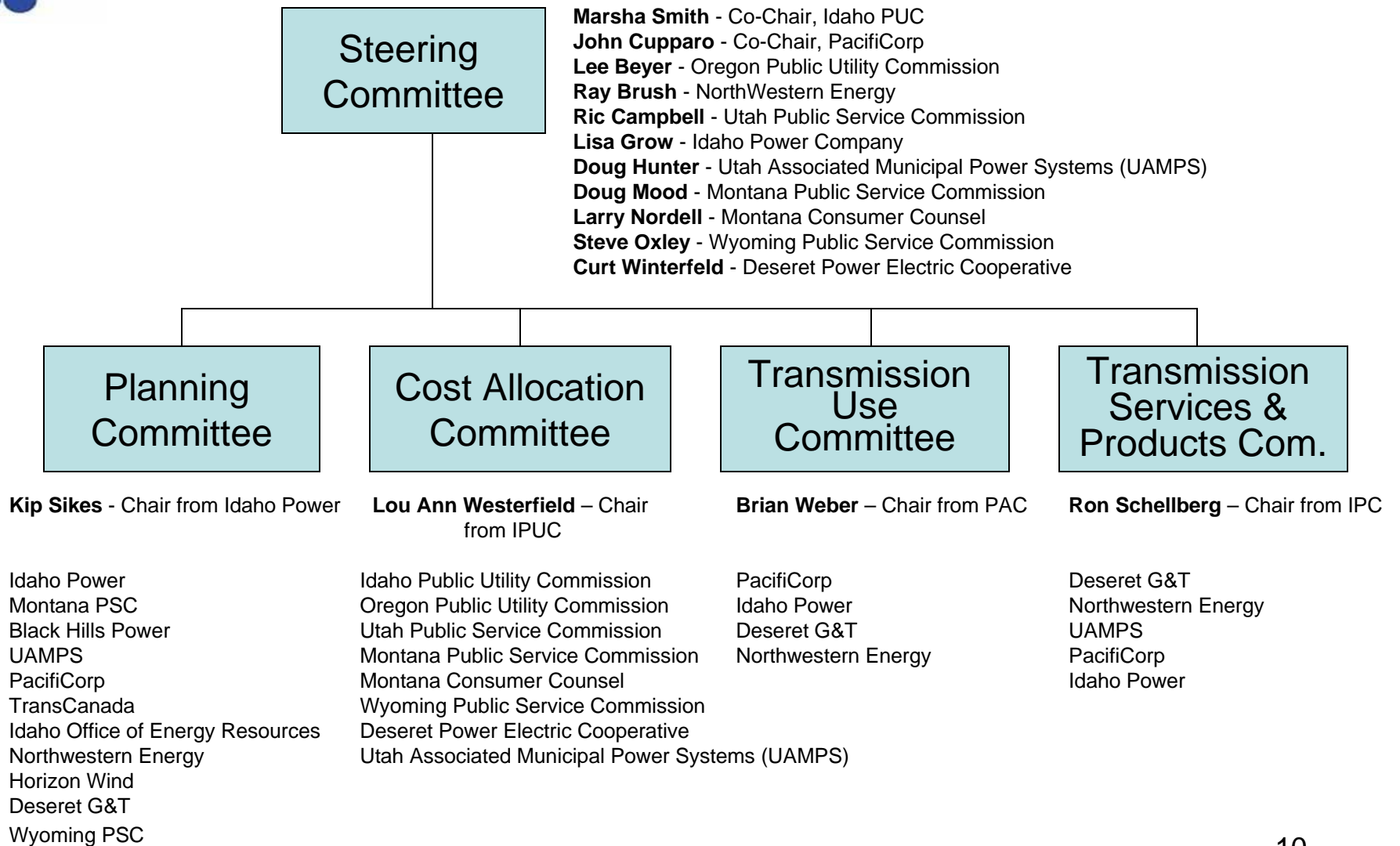
NTTG – Working towards the Perfect Transmission system

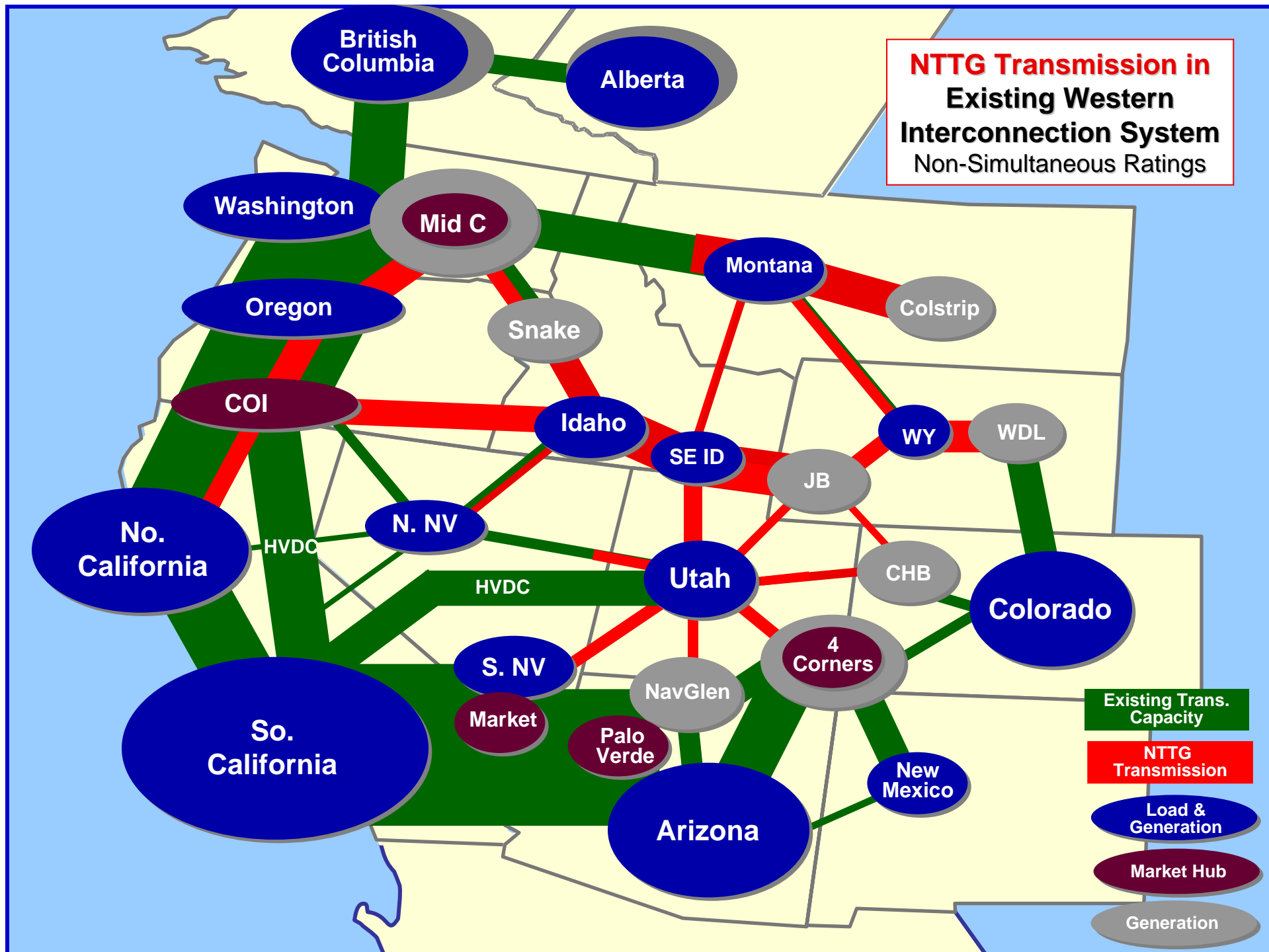
- NTTG established originally to carry forward beneficial initiatives from Grid West
 - Combined member Transmission Planning
 - Area Control Error Diversity Interchange (ADI)
 - Transmission Use and ATC
- Goals are
 - Create the equiv of a single system of like minded/situated TP's for customers
 - Accomplish needed initiatives and transmission additions
 - Results first
 - Evolve the organization as required
 - Not get bogged down in structure debate or politics
 - Use existing organizations and structure where possible - avoid duplication
- Join with other Transmission Organizations, WECC, WGA
 - Via initiatives
 - Coordination and cooperation





NTTG Org & Members







Current Activities

- Fast Track Projects underway
 - Hub & Spoke flexible plan
- Planning - Biennial Plan ala 890 Started
 - Open & Transparent stakeholder process includes all needs
 - Economic Studies
 - FERC Order 679
- Cost Allocation Committee
 - Up front review of cost allocation for level of certainty
- Use Committee
 - Common ATC methods and terminology
 - ATC: Schedule and actual's over key paths to identify congestion and expansion opportunities
 - Permitting Protocol and State Requirement catalog
- Transmission Services and Products
 - ADI Phase I Pilot
 - ADI Phase II – Exploring Virtual control area consolidation & other
- Transmission Pricing
 - Member Initiatives
 - Cluster Queue requests, studies,
 - Open Season
 - Long Term Service contracts

Path Map

Updated January 3, 2008

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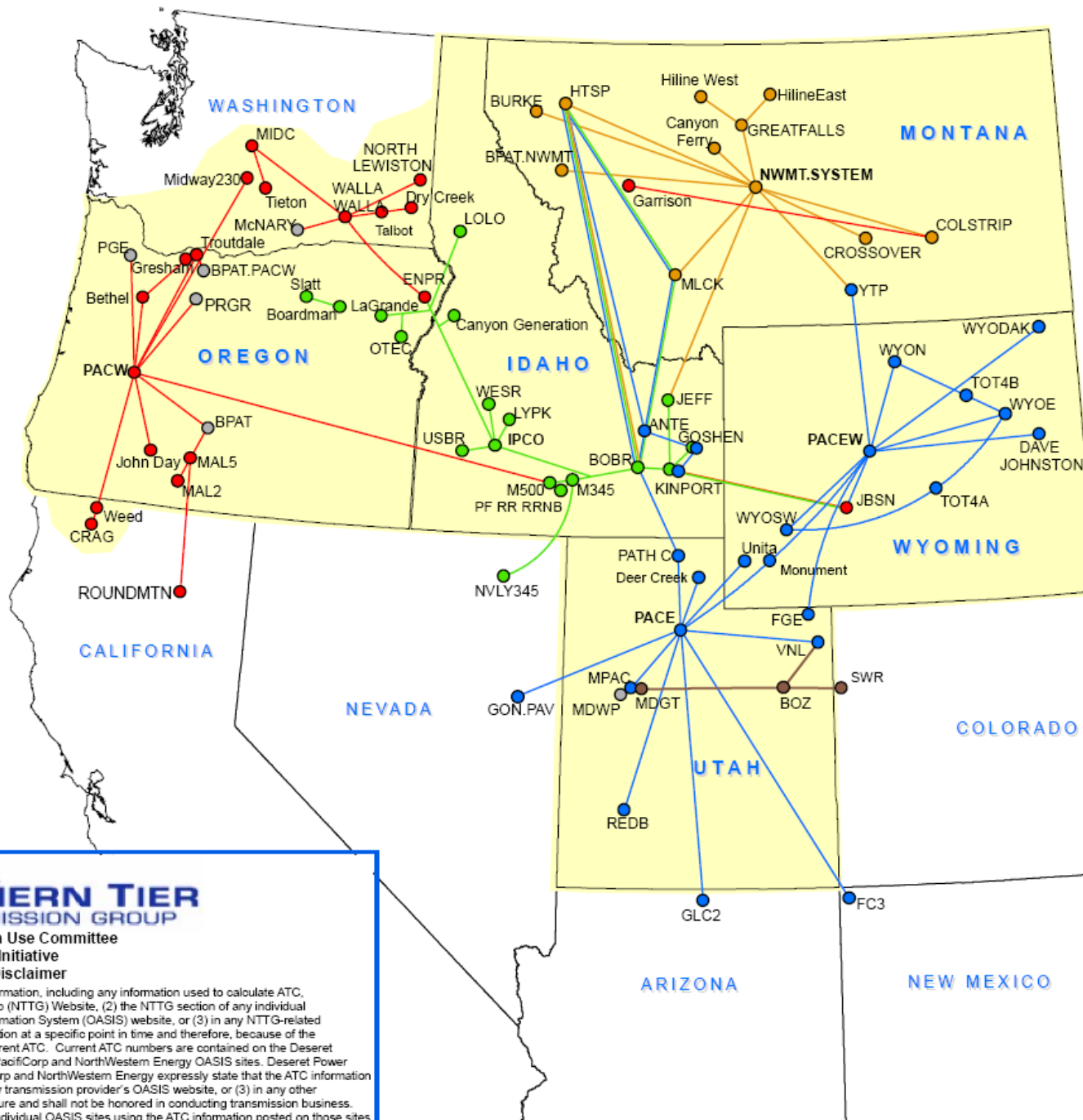
Owner

- Deseret
- Idaho
- NorthWestern
- PacifiCorp East
- PacifiCorp West

Paths

Owner

- Deseret
- Idaho
- NorthWestern
- PacifiCorp East
- PacifiCorp West



Transmission Use Committee
ATC Initiative
ATC Disclaimer

All ATC (Available Transmission Capacity) related information, including any information used to calculate ATC, contained on (1) the Northern Tier Transmission Group (NTTG) Website, (2) the NTTG section of any individual transmission provider's Open Access Same-time Information System (OASIS) website, or (3) in any NTTG-related electronic or paper documentation represents information at a specific point in time and therefore, because of the dynamic nature of ATC, should not be relied on as current ATC. Current ATC numbers are contained on the Deseret Power Electric Cooperative, Idaho Power Company, PacifiCorp and NorthWestern Energy OASIS sites. Deseret Power Electric Cooperative, Idaho Power Company, PacifiCorp and NorthWestern Energy expressly state that the ATC information on the (1) NTTG Website, (2) the NTTG section of any transmission provider's OASIS website, or (3) in any other non-OASIS documentation is only informational in nature and shall not be honored in conducting transmission business. All transmission business shall be conducted on the individual OASIS sites using the ATC information posted on those sites.

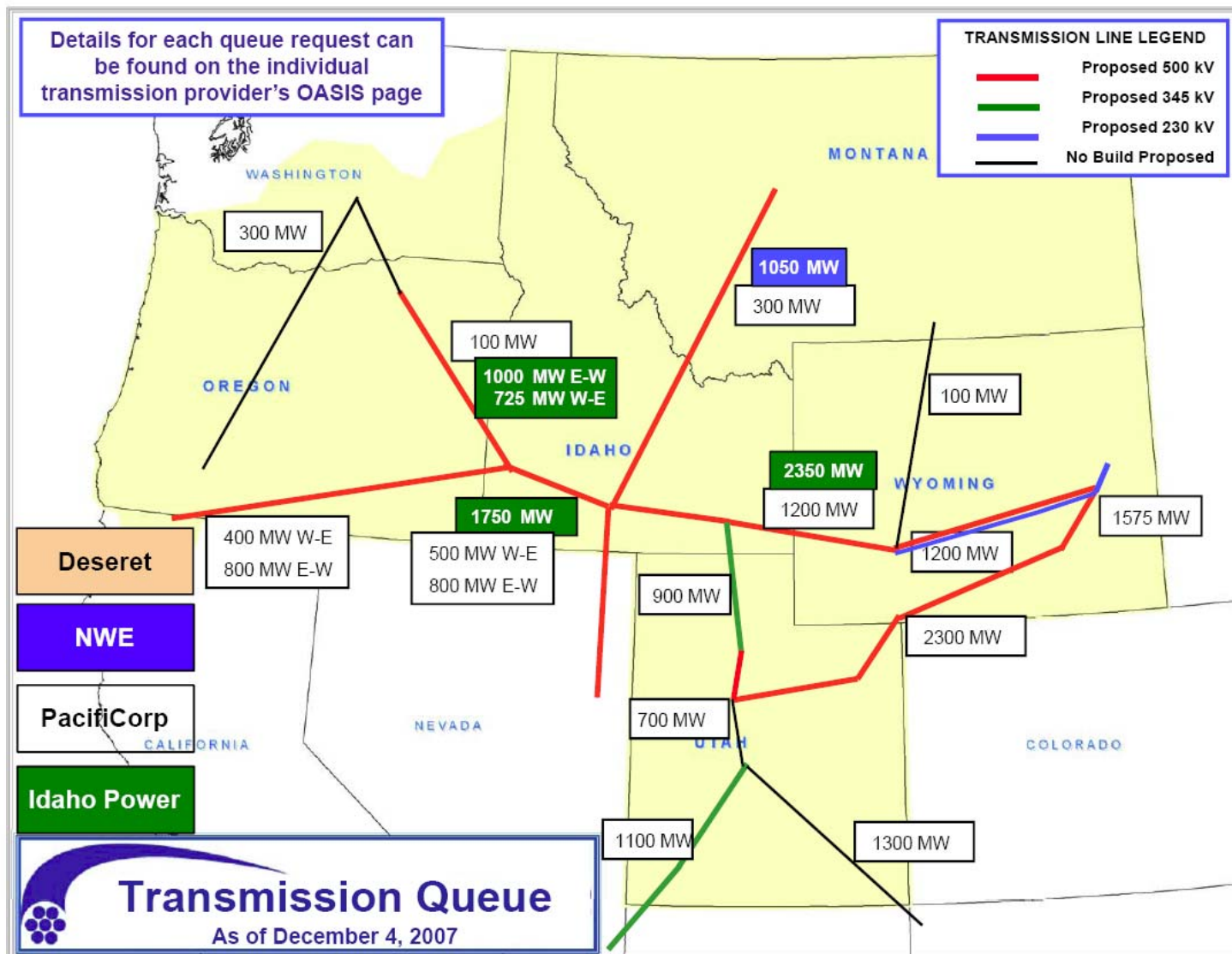


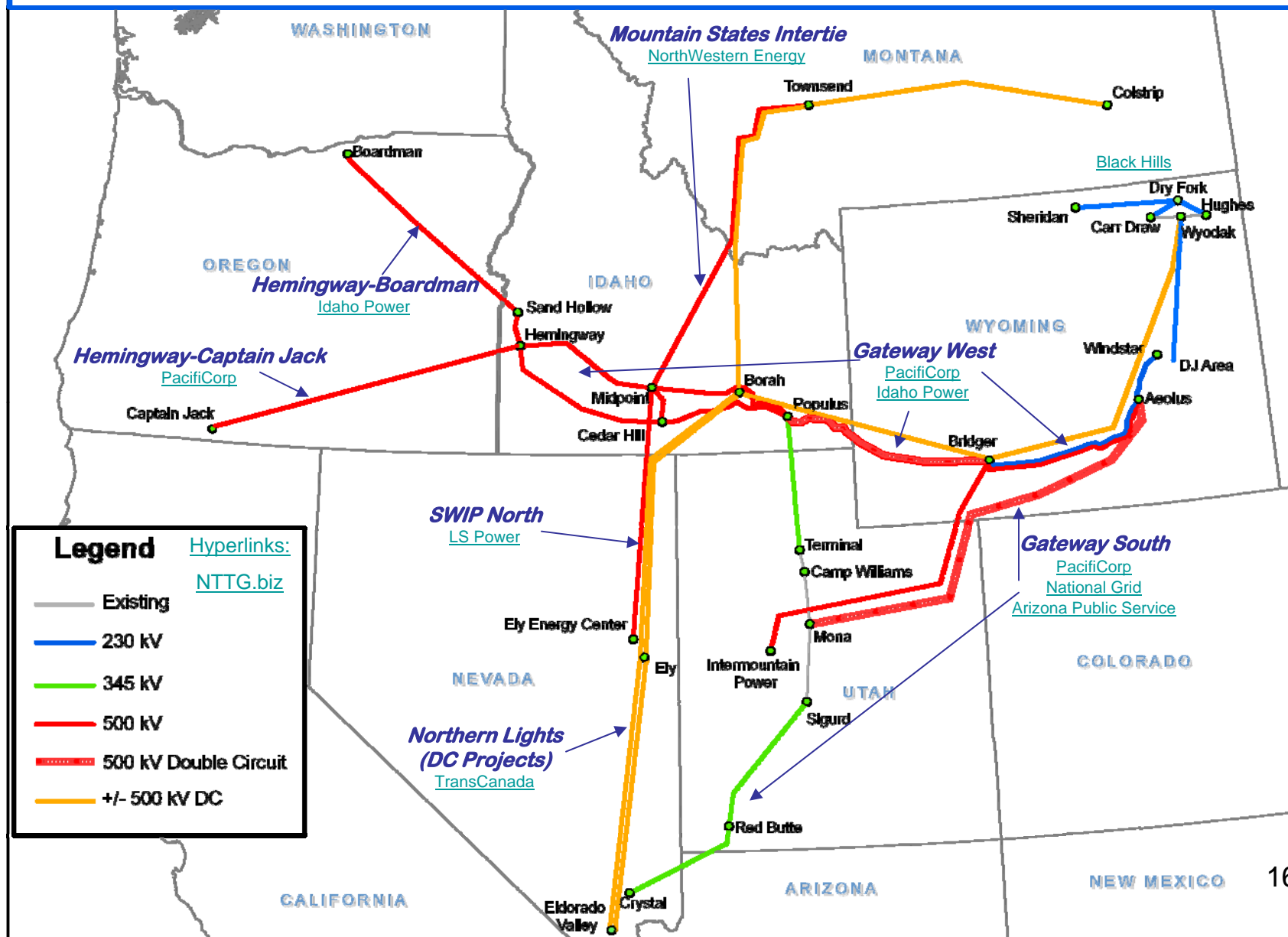
*This information is still being updated. Additions or modifications are welcome.
Please use the PowerPoint version to modify and send your comments
Missing data may be updated from the SSG-WI data base*

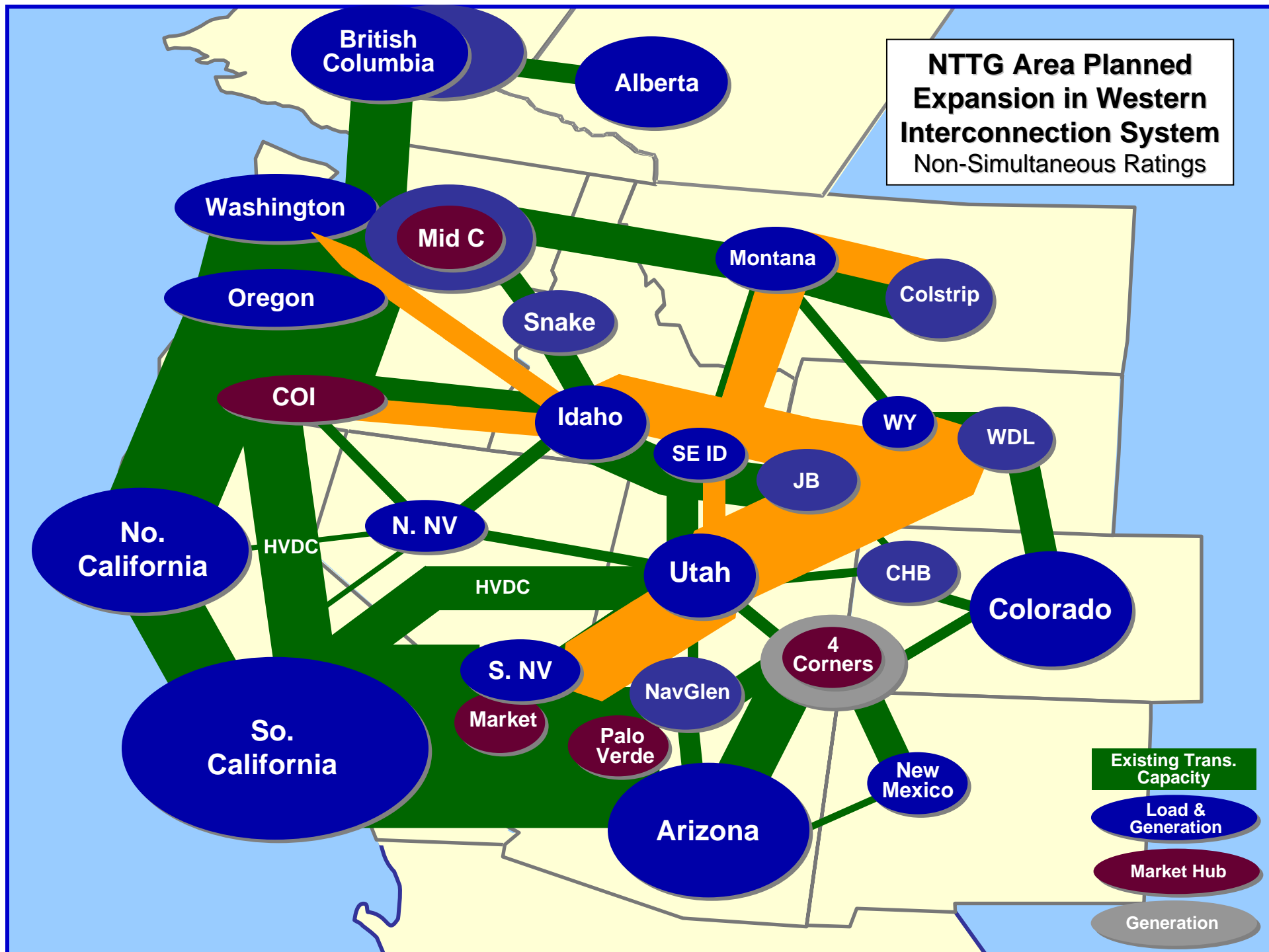




Queue Requests on Member Systems









Looking Down the Road

- Need for Regional Initiatives
 - Unification via cooperation and coordination – not forced consolidation
 - Joint initiatives:
 - ADI
 - Planning
 - Re-Dispatch, Balancing and A/S Markets
 - Pricing
 - Operations
 - Need State Participation for Multi-State initiatives